

NEW CLAIMS

1. Support bearing for a roll (33), adapted to be immersed in a liquid metal bath, defining a first rotation axis (X), comprising a first bush (31) fitted coaxially on pins (32) at the end of a roll (33) and with substantially cylindrical outer surface, a second bush (34) fixed to a supporting element (37) of the roll (33) wherein the first bush (31) is held inside the second bush (34) rotatingly around the axis (X), wherein the second bush (34) has an outer convex surface defining a toroidal surface wherein the first and second bush (31, 34) define, during operation, a reciprocal contact surface (43) throughout their common length, the second bush (34) is positioned inside a retaining ring of the supporting element (37), said retaining ring having a cylindrical inner surface whereby the bearing is suitable to rotate, substantially without friction, around a second axis orthogonal to the first axis (X) characterised in that the first bush (31) has at least one axial helical groove (39) on the outer surface and the second bush (34) has one or more substantially axial longitudinal grooves (40, 41) on the inner surface.
2. Device according to claim 1, wherein a first (40) of said longitudinal grooves is positioned before the reciprocal contact surface (43) in order to create an accumulation of liquid metal, suitable for lubricating and cooling, and a second (41) of said longitudinal grooves is positioned after said reciprocal contact surface (43).
3. Device according to claim 1, wherein the second bush (34) is kept in place by plates (35) welded to a bearing support (36).
4. Device according to claim 1, wherein the clearance between the first bush (31) and the second bush (34) is preferably less than 1 mm.